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FEDERAL COMMUNICATIONS COMMISSION OFFICE OF THE SECRETARY

Before the Federal Communications Commission Washington, DC 20544

In the Matter of

Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing them. PR Docket 92-235

To:

The Commission

## COMMENTS

HLUSKA Enterprises Inc submits its comments in response to the Commission's notice of Proposed Rule Making in this proceeding, concerning:

- 1. Power Restrictions on Fixed Stations at Higher Elevations.
- 2. Channel Splitting.
- 3. Frequency Stability.
- 4. Consolidation of Private Land Mobile Radio Services.

Complete comments are provided on the following page.

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1. Power Restrictions: This proposal, which would require licensees to reduce power depending on height above average terrain, is a two dimensional solution to a three dimensional problem that will not work and that we strongly oppose.

In most cases, high elevation transmitter sites are surrounded by natural obstacles such as other mountains. Environmental, economic and zoning concerns often prohibit use of the best transmitter site. Consequently, many transmitters are located miles away from the desired coverage area. To compensate for these factors, a licensee must use sufficient power to cope with geographic realities.

Air pollution and other exogenous factors can cause a dramatic loss of signal strength at the mobile receiver. Losses of 20 to 30 DB are frequently noted in the Los Angeles area during periods of high air pollution. Snow and ice on the antenna in winter can decrease the performance of the system as can foliage and trees during the growth season. Conditions around the receiver -- which, in a mobile unit, change continually -- often restrict reception. Clearly, radio systems must be designed to include sufficient reserve gain to have the dynamic range to reach its mobile receivers undiminished by variable environmental factors.

Under the Commission's proposal, specifying licensed output in terms of effective radiated power (ERP) would impose a subjective theoretical standard on the real world where it well may not be applicable. Line loss, antenna gain and directional distortions caused by the tower on which the antenna is mounted often will severely distort the realities of the equation.

At the present time, the mobile area of operation for many licensees is 75 miles around a base station or repeater. As this fact is recognized in existing licenses, the FCC should permit licensees to use adequate power to cover the area of operation specified in the license unaffected by to the unreasonably low power limits

equipment, which is single side band (SSB), is unacceptable to most users because of its poor audio quality. Moreover, this equipment has not been proven on a large scale as no licenses have been issued on the 220 band. Although long available for the 150 band, it has not gained wide-spread acceptance due to poor voice quality. The cellular telephone industry is now testing both digital and analog time-division equipment in an effort to develop standards for narrow band transmission. Reports indicate that those systems that have been installed are providing less than satisfactory results.

We oppose implementation of channel spacings of 5 and 6.25 khz on the 150 to 512 bands until: such standards have been proven on the 220 band; an industry consensus has emerged for technology that meets these standards; manufacturers have proven equipment ready to be marketed.

- 3. Frequency Stability: The FCC's proposal, which would tighten frequency stability to one part per million (PPM) on mobile units, serves no useful purpose. The difference in performance from existing equipment, particularly in the 150 to 174 mega-hertz band will not be apparent. No commonly available test equipment is capable of accurately measuring compliance with the fixed station standard of 0.1 ppm. We oppose this proposal as it will only serve to make obsolete all existing radios and to make new radios far more expensive.
- 4. Frequency Coordination: The Commission's proposal, which would cut the number of coordinators from 19 to three, would wreak havoc on the frequency

